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**1. How does groundwater recharge occur and what new technologies could augment that recharge and be applied to agricultural pumping?**

There are four groundwater basins in the Northwest Basins Planning Area -- the Detrital Valley Basin, the Sacramento Valley Basin, the Hualapai Valley Basin, and the Meadview Basin.

Groundwater recharge varies among those four basins. Natural groundwater recharge occurs from infiltration of runoff in washes, along mountain fronts and from streambed infiltration.

Groundwater recharge in the Meadview Basin is relatively small due to low rainfall and high evaporation rates. Incidental recharge may also come from infiltration of agricultural irrigation.

The Arizona Department of Water Resources ("ADWR") identified opportunities for artificial groundwater storage and recovery in its report, ["A Strategic Vision for Water Supply Sustainability, 2014" \("Strategic Vision"\)](#).<sup>1</sup> Artificial recharge is an increasingly important tool in the management of Arizona's water supplies, particularly in meeting the goals of the 1980 Groundwater Management Code. Storing water underground to ensure an adequate supply for satisfying current and future needs is both practical and cost-effective in our desert environment.

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<sup>1</sup> "Arizona's Next Century: A Strategic Vision for Water Supply Sustainability, 2014, page P.A. 15-1.

**2. As the water level goes down in various wells will there be useable water? Has there been any sampling of water at any great depth?**

As a general matter, the Arizona Department of Environmental Quality is the state agency charged with collecting and monitoring water quality information. Water quality information and reports referenced during the Northwest Basins Planning Area hydrologic and water use presentation can be downloaded from the links below.

(<http://www.azdeq.gov/environ/water/assessment/ambient.html>)

[Department of Environmental Quality-Water Quality Division website.](#)

**3. Is desalination going to be a factor in the Planning Area's future and will there be a salinity problem?**

ADWR has general information regarding desalination in [the Strategic Vision](#) which address the topic starting on page 60 of the report. The Strategic Vision identifies desalination as a water supply development opportunity. Additionally, the Governor's Water Augmentation Council recommend the identification of large-scale augmentation opportunities (which could include desalination) be a topic of focus for the next fiscal year. With respect to the salinity of local groundwater, please see the response to Question #2 above.

- 4. As part of ADWR’s review of data; will ADWR develop revised water budgets for Hualapai and Sacramento Basins that take into account the current acreage and agricultural production as well as that acreage that is scheduled for agricultural conversion in the near future?**

A goal of the Northwest Basins Planning Area process is not to develop a water budget but rather to develop new baseline and projected demand data for agriculture, municipal, and industrial sectors for all basins of the Planning Area. One source of data that will be utilized is the 2015 provisional estimates of irrigation water withdrawn provided by the USGS<sup>2</sup> to better understand current and future water budgets within the Hualapai and Sacramento Basins.

- 5. Who do I contact if my well goes dry?**

ADWR is currently seeking information from residents who have concerns regarding water issues in their area. ADWR is collecting data related to wells going dry. This data is fundamental to the analysis required to understand the water conditions in the area. To report your water concerns or to report that your well has gone dry, you may submit an [Arizona Water Questionnaire](#) online or by mail. You may also contact John Riggins at [jrriggins@azwater.gov](mailto:jrriggins@azwater.gov) or at (602)771-4782. Please note that ADWR does not have the authority to provide financial assistance for well repair.

- 6. Is the Hualapai Tribe able to be a member of the Governor’s Augmentation Council?**

The members of the Governor’s Water Augmentation Council were appointed by the Governor in December of 2015. ADWR does not have authority to add members to the Council. As per Executive Order 2015-13, ADWR provides staffing and technical support to the Council which consist of members appointed by the Governor who serve at the pleasure of the Governor.

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<sup>2</sup> 2015 USGS Agricultural Acreage and Pumpage Provisional Estimates.

**7. How many years will the Planning Area Process take the Department?**

As part of the Governor's Arizona Water Initiative, the goal is to evaluate all 22 Planning Areas identified in the Strategic Vision within the next five years. The first year of this process includes the West Basins, Cochise, and the Northwest Basins Planning Areas. There is no scheduled date of completion for any Planning Areas, however ADWR anticipates that evaluation of each Planning Area will take approximately one year.

**8. How is ADWR going to address groundwater withdrawals made on land owned by the Bureau of Land Management?**

Regardless of land ownership, outside of Active Management Areas ("AMAs") and Irrigation Non-Expansion Areas ("INAs"), groundwater can be withdrawn and used for any reasonable and beneficial use, subject to certain rules regarding the transportation of the water outside of the applicable sub-basin or basin.

**9. How long after a person files a notice of intent to drill can the person start drilling?**

A Notice of Intention to Drill form ("NOI") must be filed with ADWR for all wells outside of an AMA and for all exempt wells within an AMA. Pursuant to A.R.S. § 45-596, within fifteen days of receipt of the NOI, ADWR shall record the notice, mail a drilling card that authorizes the drilling of the well to the well driller identified in the notice and mail written notice of the issuance of the drilling card to the person filing the NOI at the address provided in the NOI. On receipt of the drilling card, the well driller may proceed to drill or deepen the well as described in the NOI.

**10. What impact and restrictions does an AMA and an INA have on domestic wells?**

In both AMAs and INAs, a well with a maximum pumping capacity of 35 gallons per minute used for domestic purposes, including watering less than two acres of land, is an “exempt” well.

Exempt wells must be registered with ADWR but are subject to fewer requirements than non-exempt wells within AMAs and INAs.

For instance, within an AMA, a person withdrawing water from a non-exempt well must have a groundwater right or a permit to pump groundwater legally. Generally, no right or permit is required to withdraw water from exempt wells. In both AMAs and INAs withdrawals from non-exempt wells usually must be metered and reported. These metering and reporting requirements do not apply to withdrawals from exempt wells.

Additional information regarding requirements for exempt and non-exempt wells within AMAs and INAs can be found on [ADWR's website](#).